UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,735	12/28/2001	George R. Mondie	018525-0732	7453

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TRAIL, ALLYSON NEEL

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/033,735	MONDIE, GEORGE R.
	Examiner	Art Unit	
	Allyson N Trail	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *April 16, 2004*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-3, 7, 9, 10, and 25-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3,7,9,10 and 25-27* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Amendment

1.   In the previous Office Action dated February 12, 2004, a restriction was required.

The applicant elected to pursue the claims of Group 1 in this application. Claims 17-19,

20-24 and 28-33 were canceled.

Claim Objections

2.   Claim 2 is objected to because of the following informalities:

Re claim 2, line 2: replace "was" with --is--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-3, 7, 9-10, and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Empedocles et al (2002/0031783) in view Haga (5,629,512).

Empedocles et al teaches the following in regards to claim 1:

"The present invention generally provides devices, compositions of matter, kits,

systems and methods for detecting and identifying a plurality of signals from within a

signal area. In a particular embodiment, the invention provides systems and methods

for detecting and identifying a plurality of spectral barcodes from throughout a sensing

area, especially for identifying and/or tracking inventories of elements, for high-

throughput assay systems, and the like. The invention will often use labels which emit identifiable spectra that include a number of discreet signals having measurable wavelengths and/or intensities." (Page 1, paragraph 0003).

"An example of a static spectral imaging system is one in which a spatial image is passed though several beam-splitters, separating it into multiple images, each of which is passed though a different band-pass filter. Each resulting image provides information about a discrete region of the spectrum. The images are then projected onto a detector and the signals are recombined to produce an image that contains information about the amount of light within each band-pass." (Page 13, paragraph 0116).

Empedocles et al teaches the following in regards to claim 2:

"A database 32, similarly embodied on a machine-readable code, will often include a listing of the elements included in library 8, the spectral codes of the labels associated with the elements, and a correlation between specific library elements and their associated codes. Processor 16 uses the information from database 32 together with the spectrum characteristics sensed by sensor 18 to identify a particular library element 12a." (Page 11, paragraph 101).

Empedocles et al teaches the following in regards to claim 7:

"A CCD can identify the relative wavelengths of signals making up the spectra." (Abstract).

Empedocles et al teaches the following in regards to claim 9:

As mentioned above (in regards to claim 1) the machine readable indicia comprises a bar code.

Empedocles et al's teachings above fail to specifically teach the article being labeled with a label comprising light polarizing material. Empedocles et al also fails to teach the light polarizing material and the reflective material being transparent to visible light.

Haga teaches the following in regards to claims 1 and 3:

"An invisible information recording medium includes an underlying layer, an invisible information recording layer provided above the underlying layer, being invisible under visible light, and fluorescing upon being applied with light having a particular wavelength excepting that of the visible light, thus becoming visible, and an optical modulation layer provided between the underlying layer and the recording layer." (Abstract)

"When the optical modulation layer includes an optical polarizing film, an information reading apparatus for reading information from the medium includes an information reading optical system for reading information from the recording layer which has become visible, and an optical polarizing unit, interposed between the recording layer and the optical system and having an optical polarizing angle perpendicular to that of the polarizing film, for guiding light from the recording layer which has become visible to the optical system." (Abstract).

Haga teaches the following in regards to claim 10:

"For example, a stealth bar code can be formed by printing with an ink containing a fluorescent material which is invisible under visible light but is excited upon being applied with ultraviolet rays to emit visible light, thus becoming visible." (Col. 1, lines 39-43).

Haga teaches the following in regards to claim 27:

"With this arrangement, under ordinary visible light, both the stealth bar code layer 26 and the photochromic layer 24 are transparent." (Col. 6, lines 65-67).

In view of Haga's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Empedocles et al's method of dividing light reflected from the indicia onto a plurality of beams, filtering each beam, and generating an electronic image from each of the filtered beams with a detector with decoding the polarized material machine readable codes. Empedocles et al teaches decoding labels which emit identifiable spectra that include a number of discreet signals having measurable wavelengths and/or intensities, however fails to specifically state that the label is comprised of polarized material (which has the same characteristics as Empedocels et al's labels). Therefor the method taught by Empedocels et al could also apply to a label consisting of polarized material. One would be motivated to use the method of splitting light into a plurality of beams, filtering the beams, and recreating the image depending on the filtered beams in order to create readable image that does not show any distortion.

5.   Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Empedocles et al (2002/0031783) in combination with Haga (5,629,512) and in further

view of Rhoads (5,636,292).

Empedocles et al's teachings in combination with Haga's teachings are

discussed above.

Empedocles et al in combination with Haga fail to teach the step of comparing

two images and subtracting a first digitalized image from a second digitalized image to

obtain a difference representing the machine readable indicia.

Rhoads teaches the following in regards to claim 25:

"The next step is to subtract the original digital image from the newly normalized

suspect image only within the standard mask region. This new image is called the

difference image." (Col. 11, lines 38-41).

In view of Rhoads' teachings it would have been obvious to one of ordinary skill

in the art at the time the invention was made to apply the method of subtracting one

digital image from a second digital image and create a difference image to the

combination of the teaching of Empedocles et al and Haga. The combination of the

teachings includes a motivation for creating a non-distorted image. Filtering each beam

and using the filtered beam to create an image helps accomplish the non-distorted

image. Additionally using the method of subtracting one image from another and

creating a difference image would only increase the likelihood of a non-distorted image.

6.   Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Empedocles et al (2002/0031783) in combination with Haga (5,629,512) and in further

view of SANO et al (2001/001472).

Empedocles et al's teachings in combination with Haga's teachings are

discussed above.

Empedocles et al in combination with Haga fail to teach the indicia comprising

postal address information and the articles comprising mail pieces.

SANO et al teaches the following in regards to claim 26:

"In recent years, a system for automatically inputting information by making use

of bar code has been studied in various fields of industry. For example, there has been

an attempt to print bar code corresponding to zip code and address on the surface of

mails such as postal cards so as to allow to sort mails automatically by reading the bar

code on the mails, thereby enhancing the efficiency of postal service." (Page 1,

paragraph 0002).

In view of SANO et al's teachings it would have been obvious to one of ordinary

skill in the art at the time the invention was made for the indicia taught by Empedocles

et al in combination with Haga to comprise postal address information and the articles to

comprise mail pieces. Empedocels et al in combination with Haga teach a method of

reading indicia such that the image read is clear and not distorted. One would be

motivated to use the same imaging method while decoding postal information in order to

sort the mail correctly.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure: Metlitsky et al (5,545,886), Iseli (4,906,829), Andersen et al

(6,542,259), Allen et al (2001/0036013), De Renzis et al (6,129,280), Verschuur et al

(6,168,080), Krieg et al (5,430,278), Peterson (4,260,881), Cyr et al (5,959,296), and

Rubin et al (2003/0121978).

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-

2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM

Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number

for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those

under 35 U.S.C. 132 or which otherwise require a signature, may be used by the

applicant and should be addressed to **[allyson.trail@uspto.gov]**.

All Internet e-mail communications will be made of record in the application file.

PTO employees do not engage in Internet communications where there exists a

possibility that sensitive information could be identified or exchanged unless the record

includes a properly signed express waiver of the confidentiality requirements of 35

U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published

in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG

89.

Allyson N. Trail
Patent Examiner
Art Unit 2876
June 24, 2004

JARED J. FUREMAN
PRIMARY EXAMINER